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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,796	03/06/2002	Enrique Garcia	IBM 0115	8791

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EXAMINER

KNOLL, CLIFFORD H

ART UNIT PAPER NUMBER

2112

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/091,796

Applicant(s)

GARCIA ET AL.

Examiner

Clifford H Knoll

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3,4,6-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,6-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This Office Action is responsive to communication filed 1/10/05. Currently claims 3-4, 6-9, 11-14 are pending. Claims 1-2, 5, and 10 have been cancelled.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

1. *Claims 3-4, 6-9, and 11-14 stand rejected under 35 U.S.C. 102(e) as being anticipated by Jeddeloh (US 6473817).*

Regarding claims 12-14, Jeddeloh discloses fixing an arbitration (e.g., col. 4, lines 38-42), performing experiments of skewing arbitration priority to particular agents, the experiments skewed from the fixed arbitration (col. 4, lines 61-65), and assigning resource arbitration priority to each agent based on a historical ratio comprising demands (e.g., col. 5, lines 31-38).

Regarding claim 3, Jeddeloh also discloses the step of applying statistical techniques to the correlated data to determine a mean demand for each agent (e.g., col. 5, lines 7-8).

Regarding claim 4, Jeddeloh also discloses repeating the process of determining the demand, correlating the demands and assigning resource arbitration (e.g., col. 4, lines 18-21).

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Regarding claim 6, Jeddeloh also discloses the PCI bus and agents (e.g., col. 7, lines 25-27).

Regarding claim 7, Jeddeloh also discloses a bus monitor consisting of logic which monitors some or all of bus transactions for each said bus agent (e.g., col. 5, lines 31-38); and programmable bus arbitration logic comprising priority assignment registers for each bus agent and logic to generate said grant control signals based on the data stored in said priority assignment registers (e.g., col. 4, lines 43-47).

Regarding claim 8, Jeddeloh also discloses calculating the bus effective bandwidth for each transaction of each said bus agent, and stores the running average for each bus agent in bandwidth registers (e.g., col. 5, lines 8-11).

Regarding claim 9, Jeddeloh also discloses decoding said priority assignment registers for each bus agent and assigns each agent a number of grant control signals based on the value in its respective priority assignment register (e.g., col. 6, lines 54-60).

Regarding claim 11, Jeddeloh also discloses correlating resource requirements for each agent over a specified period of time and determining a mean resource requirement for each agent (e.g., col. 5, lines 8-11) and statistically removing aberrations from the data (e.g., col. 5, lines 8-10, the process of averaging removes aberrations, an average is a statistic).

### ***Response to Arguments***

Applicant's arguments filed 1/10/05 have been fully considered but they are not persuasive.

Regarding claim 12, Applicant argues that in Jeddelloh "decrementing of weighted bandwidth is a normal sequence, and teaches away from Applicants' 'experiments' which are 'skewed from the fixed arbitration'" (p. 7); however Jeddelloh teaches that "[w]hen the value of the current weighted bandwidth is equal to a minimum value, the priority rank of the device is set to the minimum value and the priority rank of the devices which previously had a lower priority rank is incremented" (col. 4, lines 61-65). Examiner finds that the lowering of one priority value and the raising of certain other priority values anticipates the claimed "skewing" of priority values "from the fixed arbitration". After the historical ratio is derived, a resource arbitration priority is assigned, as cited supra.

Regarding dependent claims 3, 4, 6-9, and 11, Applicant argues that the claimed "experiments" which are "skewed from the fixed arbitration" is further defined; however Examiner finds that additional features fail to distinguish the claimed invention.

Thus the rejection of the invention as claimed stands.

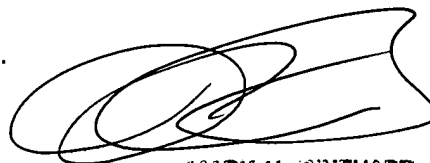
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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